



Int. Application No. PCT/EP 03/008067 Sherwood Services AG et al. 99625 r15/r4/lcl 8.7.04

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CLAIMS:

- 1. A surgical instrument (10) for passing a material into a body in a minimally invasive procedure comprising:
- a first member (12) having a longitudinal section (16) defining a longitudinal axis and an arcuate section (18) extending distally from the longitudinal section, wherein:
- a proximal portion (36) of the arcuate section curves away from the longitudinal axis in a first direction and defines a first radius of curvature (R1); and
- a portion (38, 40) of the arcuate section distal of the proximal portion (36) curves toward the longitudinal axis in a second direction and defines a second radius of curvature (R2, R3).
- 2. The surgical instrument as recited in claim 1, wherein the first member comprises a hollow outer tubular member.
- 3. The surgical instrument as recited in claim 2, further comprising a stylet (14) at least partially movable within the outer tubular member and engageable with a material to pass the material within the body.
- 4. The surgical instrument as recited in claim 1, wherein a distal portion (40) of the arcuate section has a third radius of curvature





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- (R3), different from the second radius of curvature (R2).
- 5. The surgical instrument as recited in claim 4, wherein the portion of the arcuate section distal of the proximal portion (36) has a central section (38) and a distalmost section (40), the central section having the second radius (R2) and the distalmost section having the third radius (R3), the second radius (R2) being larger than the third radius (R3).
- 6. The surgical instrument as recited in claim 4, wherein the portion of the arcuate section distal of the proximal portion (36) has a central section (38) and a distalmost section (40), the central section having the second radius (R2) and the distalmost section having the third radius (R3), the second radius (R2) being smaller than the third radius (R3).
- 7. The surgical instrument as recited in claim 1, wherein a portion of the distal section extends across the longitudinal axis in the second direction.
- 8. The surgical instrument as recited in claim 3, wherein the stylet (14) is flexible.
- 9. The surgical instrument as recited in claim 3, wherein the stylet (14) includes a slot (28) at a first end (26) for receipt of an end of a





material.

10. The surgical instrument as recited in claim 3, wherein the stylet (14) includes a conical tip (24) at a second end.

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- 11. The surgical instrument as recited in claim 10, wherein a diameter (d3) of the conical tip (24) is greater than an inner diameter of the outer tubular member.
- 12. The surgical instrument as recited in claim 2, wherein the outer tubular member (12) has a handle (20) at a proximal end (22) thereof.
- 13. The surgical instrument as recited in claim 12, wherein the handle has a laterally extending portion (44).
- 14. The surgical instrument as recited in claim 13, wherein the arcuate section (18) defines a first plane and the laterally extending portion defines a second plane substantially perpendicular to the first plane.
- 15. The surgical instrument as recited in claim 3, further comprising a material and wherein the material comprises a generally flat tape (50).
- 16. The surgical instrument as recited in claim 15, wherein at least one end (54) of the tape (50) is cut at an angle for ease of threading the tape





into the stylet.

- 17. The surgical instrument of claim 15, wherein the tape (50) comprises a material including multifilament strands.
- 18. The surgical instrument of claim 17, wherein the tape (50) comprises polypropylene strands.
- 19. The surgical instrument of claim 3, wherein the material comprises a generally flat tape (50) and the stylet (14) has a proximal end (26) adapted to receive an end (54) of the tape.
- 20. The surgical instrument of claim 18, wherein the stylet is positioned in the tubular member (12) so that the proximal end (26) of the stylet is located adjacent a proximal end (22) of the tubular member.
- 21. The surgical instrument of claim 3, wherein the stylet (14) has a distal end that is blunt.
- 22. The surgical instrument of claim 20, wherein the distal end comprises a blunt conical tip (24).
- 23. The surgical instrument of claim 3, wherein the stylet has a distal end that is sharp.
- 24. The surgical instrument of claim 1, further comprising the material and wherein the material comprises an absorbable material.

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